

# *Leptophilypnus guatemalensis* Thacker & Pezold, 2006 (Gobiiformes: Eleotridae): First record in México

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**ABSTRACT:** We present the first record of the fish *Leptophilypnus guatemalensis* Thacker & Pezold, 2006 (Gobiiformes: Eleotridae) in the state of Chiapas, México, within the Grijalva–Usumacinta basin. Morphological and morphometrical data of 20 specimens from three localities are given.

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Fish in the family Eleotridae, which includes 32 genera and about 176 species according to Eschmeyer and Fong (2013), are commonly known as sleepers. They are medium to relatively small sized fish, distributed mostly in subtropical and tropical coastal regions of the world (P. J. Miller 1981). This family is characterized by having free pelvic fins (not forming an adhesive disk) and a notorious preference for estuaries, although there are some exclusively freshwater species (Nelson 2006). There are only two genera of small sized sleepers in America: *Microphilypnus* and *Leptophilypnus* (Meek and Hildebrand 1916); these do not overlap in distribution. *Leptophilypnus* is known from drainages on both coasts of Central America, and *Microphilypnus* is restricted to the Atlantic and Caribbean drainages of South America (Thacker *et al.* 2006).

Species in the genus *Leptophilypnus* may be distinguished from the other Mexican eleotrids by the following characters: gill membranes approach closely but do not meet across the isthmus; gill opening reaches the posterior margin of the eye; mouth large and oblique with

prominent lower jaw; tongue slightly bilobed; no teeth on vomer; small canine teeth, highly recurved in several rows and forming bands in both jaws; eyes dorsolateral; interorbital not wider than eye diameter; ctenoid scales in trunk and 30–36 scales in a longitudinal series; and dorsal fins widely spaced (Meek and Hildebrand 1916).

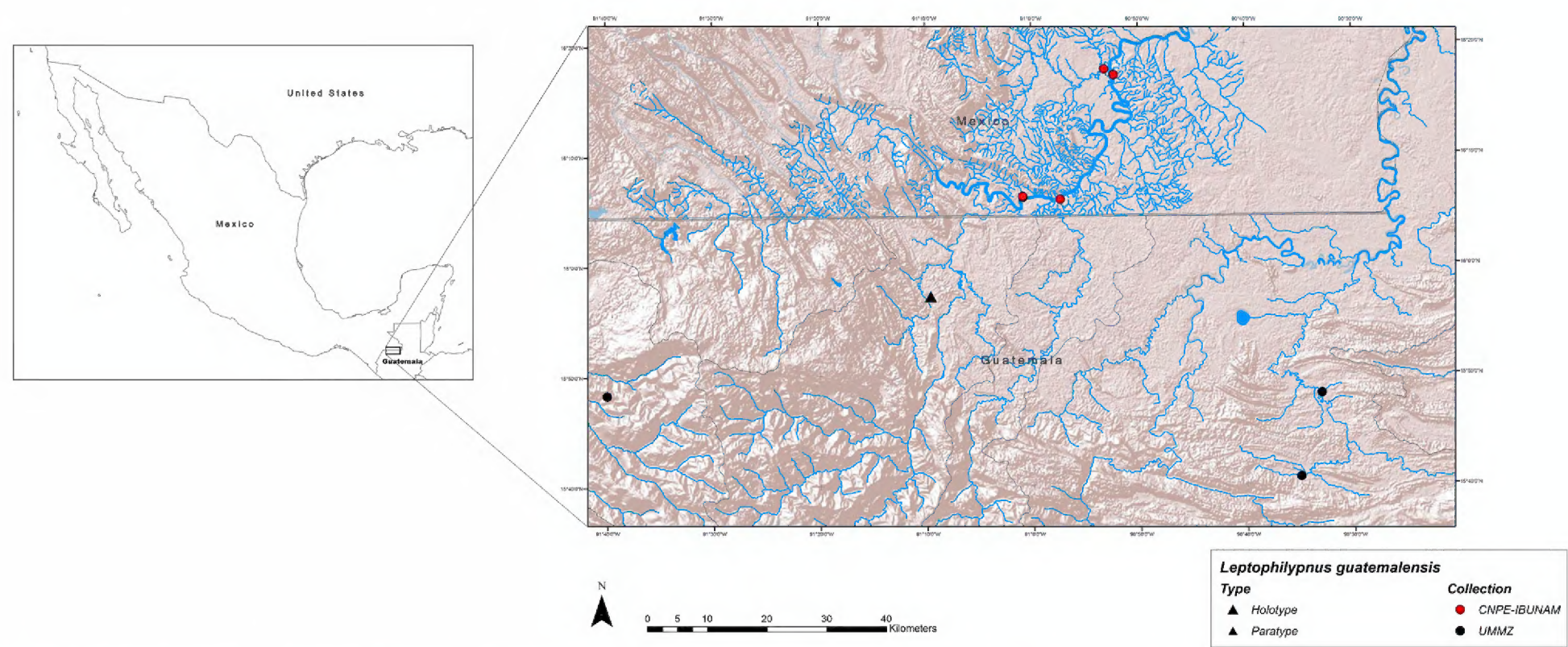
*Leptophilypnus guatemalensis* Thacker and Pezold 2006 (Figure 1) is restricted to freshwater and clearly differentiated by a vertical bar in the caudal peduncle; presence of 26–31 scales in a longitudinal series; no predorsal scales; jaws reaching posteriorly the anterior margin of the eye; head dorsoventrally compressed, width moderate, 26–35% ST head length at preopercle. Few records of this species have been documented and are from Guatemala rivers: Holotype: UMMZ 245081 and the paratypes: UMMZ 197087 (32) Guatemala, Huehuetenango, river San Ramon from the river Ixcán drainage.

The Reserva de la Biósfera de Montes Azules is located in the Grijalva–Usumacinta basin in the southeastern part of the state of Chiapas, México, comprising also Los Altos



**FIGURE 1.** *Leptophilypnus guatemalensis* Thacker & Pezold 2006, CNPE-IBUNAM 18451, 28.48 mm, from Río Tzendales–Río Lacantún basin, Chiapas, México.





**FIGURE 2.** Map of southern part of Chiapas and northern Guatemala, showing sites (red circles) where *Leptophilypnus guatemalensis* was collected in Río Lacantún basin. Triangle shows type locality, and black circles show other localities where *L. guatemalensis* has been reported.

de Guatemala and much of the Guatemalan Petén (Figure 2). River Lacantún is one of the main rivers that discharge into the Usumacinta River from the south. The Usumacinta River basin is the most extensive and largest watershed of the federal border basins (March and Castro 2010). The habitat where the specimens of *L. guatemalensis* were found was clear water with moderate current. The substrate in the localities was mainly of gravel, pebbles and rocks, and without associated vegetation.

Collecting gear included two seines, one of 3m wide with 5mm mesh and the other of 1m wide with 3mm mesh. Specimens were preserved in 70% ethanol and are housed in the Colección Nacional de Peces of the Instituto de Biología at Universidad Nacional Autónoma de México (CNPE-IBUNAM, Sabaj Pérez 2013). 20 specimens of *L. guatemalensis* from Chiapas, México were examined from a previous collection in 1993 CNPE-IBUNAM 8558 (2), at river Ixcán Embarcadero, Chiapas (16°30'00" N, 91°25'00.12" W), formerly identified as *Everthodus lyricus*, family Gobiidae; this species was reported for this area by Lozano-Vilano *et al.* 2007 as *Everthodus* cf. *lyricus*, as well as another unidentified gobioid. In another expedition during June 2013, eight specimens were collected: CNPE-IBUNAM 18448 (4) river San Pedro, near Lacantún (16°06'10.548" N, 91°00'52.452" W); and CNPE-IBUNAM 18449 (4) river Chajul near Lacantún (16°05'58.416" N, 90°57'22.6794" W). During September-October of the same year, ten more specimens were obtained: CNPE-IBUNAM 18450 (1) river San Pablo (16°06'15.47" N, 91°00'53.31" W); CNPE-IBUNAM 18451 (8) river Tzendales 16°17'45.13" N, 90°53'10.82" W; and CNPE-IBUNAM 18452 (1) isle in front of Pico de Oro, river Lacantún (16°17'12.73" N 90°52'17.14" W).

Measurements were made with a dial caliper, on the left side of the specimen, and presented as averages of standard length (SL) or head length (HL). Counts of caudal, dorsal, anal and pectoral fins rays, scales in a longitudinal series, and other morphometric and meristic data are presented in Table 1. Our observations are congruent with the data provided by Thacker *et al.* (2006).

Miller (1986) averred that the genus *Leptophilypnus* had not been recorded in México yet, but undoubtedly occurred

there. However in 2005, he only reported four genera belonging to this family in México: *Gobiomorus* Lacepède, 1800, *Guavina* Bleeker, 1874, *Eleotris* Bloch & Schneider, 1801 and *Dormitator* Gill 1861, and did not mention the presence of *Leptophilypnus* for Mexican inland waters. Espinosa *et al.* (1993) referred to this genus endemic to the Grijalva-Usumacinta basin. Espinosa *et al.* (2008) reported five genera, adding the genus *Erotelis* Poey, 1860. Herein the present work adds a new genus and species record for the Mexican ichthyofauna: *Leptophilypnus guatemalensis* Thacker & Pezold 2006. This record increases the number of freshwater species reported for México to 506 (Espinosa-Perez 2013), and although this species is considered strictly from freshwater, the genus and family are considered vicarious, this term as proposed by Myers (1963), includes those species that have continental ranges and may have evolved from complementary or diadromus fishes.

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**TABLE 1.** Meristic and morphometric comparison of *Leptophilypnus guatemalensis* specimens.

	ORIGINAL DESCRIPTION			CURRENT WORK		
	mean	SD	n	mean	SD	n
Head width	0.3	0.03	20	0.60	0.08	20
Jaw length	0.18	0.03	20	0.23	0.04	20
Eye length	0.12	0.01	20	0.22	0.02	20
Interorbital	0.06	0.01	20	0.13	0.03	20
Head length	0.29	0.01	20	0.28	0.02	20
Pectoral length	0.28	0.02	20	0.26	0.02	20
Pelvic length	0.21	0.01	20	0.17	0.02	20
Caudal length	0.28	0.01	20	0.23	0.02	20
2nd dorsal length	0.3	0.03	20	0.12	0.01	20
Anal-fin length	0.28	0.02	20	0.12	0.03	20
SL	29.1	2.22	20	24.37	2.63	20
Dorsal-fin rays				v,9 - vi,9		20
Anal-fin rays				i,7		20
Pectoral-fin rays				14-15		20
Caudal principal rays				i,13,i - ii,13, i - i,14,i		20
Scales longitudinal series				27-29		20



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